- 45. Under the current PLMR Service structure, there has been little need for frequency coordinators to share detailed information about applicants' systems with other coordinators. Under the consolidated pool approach we are adopting today, however, commenters have indicated a need to establish a system for information exchange, but disagree on how this should best be achieved. For example, UTC recommends that coordinators in each pool devise a means of exchanging data either through a real-time method, using a shared database, or by providing notice, by facsimile or E-Mail, with a limited opportunity for response provided. Other coordinators state that a common database has to be established and maintained to ensure that applications, once submitted, are not in conflict with other applications being submitted at the same time. The Joint Pool, however, also expresses opposition to developing a national database noting that the complexity of such an undertaking would involve coordinating a substantial number of parties in order to include information that is necessary and relevant to the coordination process. It contends that electronic transmitting and receiving of frequency notifications is preferable to establishing a national coordinators' database.
- be desirable. Such a resource could be an ideal method for coordinators to share data and maintain up-to-date records of all frequency recommendations so that they can avoid coordinating multiple applications for the same channel, in the same area, at approximately the same time. We also recognize, however, that implementing a real-time common database would require extensive time, expense, and testing to perfect and that there may be other less costly and less complex methods to ensure that all necessary data is exchanged in a timely manner. Therefore, at this time, we will leave the issue of whether to use a real-time common database to perform their coordination duties to the coordinators' discretion. We believe that they are in the better position of determining what will allow them to perform such duties in an efficient effective, and expeditious manner. Coordinators may select to develop their own common database to make frequency recommendations, use the Commission's database, or use the services of a third party. We note that copies of the Commission's database are available through the National Technical Information Service. Turner, the Commission provides on-line access to its PLMR Service

Coordinators are only required to share data when invoking the interservice sharing rules. See 47 C.F.R. \S 90.176.

¹¹⁶ UTC comments at 12.

PCIA Reply Comments at 9; AAA Comments at 4; Joint Pool comments at 10-11.

Joint Pool Comments at 11-12.

¹¹⁹ AAA Comments at 4; Joint Pool Comments at 10-11.

Federal Communications Commission Information Seekers Guide, Public Service Division, Office of Public Affairs (October 1995).

database through a third party contractor¹²¹ and puts license grant information on the Internet.¹²² Any disputes that arise due to inconsistencies or discrepancies in the records of different coordinators, however, will be resolved using the Commission's database.

47. Although we are not requiring that a common database be implemented at this time, the need to share accurate and timely coordination information with all in-pool coordinators still exists. Without such information, frequency coordinators would not know what other in-pool coordinators are doing and could make conflicting coordinations. Therefore, coordinators must provide notification of all frequency recommendations within one business day of making such recommendations¹²³ to every certified in-pool coordinator that is also certified to coordinate that frequency. 124 Additionally, on frequencies that are shared between both the Public Safety and Industrial/Business Pools, coordinators must notify all coordinators of frequency recommendations. 125 We believe this notification requirement is extremely important to the consolidation process. Notification will not only improve the speed and quality of recommendations, but it will also encourage and facilitate the cooperation between in-pool coordinators that is so important to the success of the overall coordination process. We believe a one-day notification period is a good compromise between the need to provide information to coordinators quickly to minimize the chance of conflicting coordinations and the need to minimize burdens on the coordinators. Additionally, notification must be made to all in-pool coordinators at approximately the same time. At a minimum, each notification must include: name of applicant, frequency or frequencies recommended, antenna height, antenna locations, type of emissions, effective radiated power, a description of the service area, and the time the

¹²¹ *Id*.

See FCC homepage on the Wold Wide Web at: http://www.fcc.gov/wtb/databases.html.

For example, coordinators may choose to notify each other frequency coordinator every time a recommendation is made, each time a certain number of recommendations are made, or they can send a notification containing all recommendations at the close of each business day.

For example, in the Public Safety Pool, if IAFC/IMSA recommends a frequency that is currently allocated solely to the Fire Radio Service, then no notification is necessary. However, if IMSA/IMSA recommends a frequency that is currently shared between the Fire Radio Service, the Police Radio Service (coordinated by APCO), and the Emergency Medical Radio Service (coordinated by IAFC/IMSA) then IAFC/IMSA would be required to notify APCO.

For example, the frequency 151.490 MHz is currently available in the Forestry-Conservation Radio Service and the Special Industrial Radio Service. Because the Forestry-Conservation Radio Service is being placed into the Public Safety Pool and the Special Industrial Radio Service is being placed in the Industrial/Business Pool (See paras. 23 and 27, supra.), this frequency is now available to all eligible users under Part 90.

recommendation was made.¹²⁶ To safeguard this system, we will require that each coordinator communicate at least once each business day with each other in-pool coordinator. Therefore, on days in which no coordinations are made, notification is still required.¹²⁷ Coordinators, if they desire, are free to include additional information such as more data or a list of rejected coordination requests with their notifications.

- 48. We are establishing general guidelines for the one-day notification, but leaving the implementation details up to each frequency coordinator. There are a number of different ways to transfer information quickly today and each coordinator is free to choose whichever method best meets its needs. For example, coordinators may use E-Mail or facsimile. We believe that they are in the best position to determine how to fulfill this notification requirement within the one-day time frame. 128
- 49. In addition to notification of basic information on frequency recommendations, coordinators, in certain cases, may need more detailed information in order to perform engineering analyses. PCIA notes that each coordinator should have access to all relevant information. We agree. However, rather than require coordinators to routinely include all information on proposed systems, we believe a better approach is to require coordinators to provide this additional information only upon request. Therefore, each coordinator must supply, upon request, within one business day, any additional information requested regarding a pending coordination that it processed. Of course, coordinators are free to provide this information in their routine notifications if they so desire.
- 50. Another issue raised in the comments was the question of concurrence. Several commenters recommend that we prescribe some minimum period of time (e.g., ten to twenty business days) during which other coordinators in the pool may object to a proposed coordination. They argue that requiring coordinators only to notify other in-pool coordinators without allowing a corresponding period to object could result in interference to incumbents and unnecessary burdens on the Commission to resolve such problems. Others oppose any

In their comments to the Blueprint, PCIA states that a common database is not necessary, but a common data format for the exchange of filing information is necessary. See PCIA Comments to Blueprint at 8.

For example, if no coordinations are made on a particular day, the following message could be sent: "Coordinator has not made any frequency recommendations on --/--."

For example, coordinators may choose to send a notification to each other frequency coordinator every time a recommendation is made, each time a certain number of recommendations are made, or they can send one notification containing all recommendations made at the close of each business day.

PCIA Reply Comments at 9.

See, for example, the ex parte filing of the Coalition of Industrial and Land Transportation Radio Users at 2-3.

concurrence requirement. In general, they contend that a common set of coordination procedures negates the need for concurrence. Further, they argue that the concurrence would be detrimental to the benefits gained by introducing competition because other coordinators would be encouraged to delay their responses. ITA, while opposing establishing a concurrence period, notes that there may be a need for a mandatory waiting period because of the conditional licensing procedures set forth in Section 90.159 of the Commission's rules. It contends that in cases where applicants choose to take advantage of these provisions, the Commission will not have had time for formal review. To alleviate such concerns, ITA recommends instituting a mandatory waiting period of ten business days. This time frame will give coordinators a chance to express any disagreements to the Commission. Italians that the concerns is a chance to express any disagreements to the Commission.

- 51. Given the requirement to establish standard coordination procedures, we believe requiring concurrence would be redundant. Further, it could have a negative impact on our efforts to increase the quality of customer service through competition. Nevertheless, we are concerned that under the approach described herein applicants could start transmitting prior to other in-pool coordinators being notified. While we want the licensing process to be as quick as possible and believe that such situations will rarely occur, we believe all affected coordinators should be aware of a proposed operation before the entity can start transmitting. Therefore, we will amend Section 90.159 of the Commission's Rules to institute a mandatory waiting period of ten business days before applicants can begin transmitting pursuant to temporary and conditional authorization. ¹³⁴
- 52. We believe that the procedures outlined above will prevent the filing of conflicting applications. However, we realize that the one-day period between when a frequency recommendation is made and other coordinators are notified could still result in a small number of conflicting applications. In these instances, it is the joint responsibility of the applicable coordinators to take action necessary to resolve the conflict, up to and including notifying the Commission that an application may need to be returned. The coordinators are in the best position to recognize and expediently resolve such conflicts. Additionally, we believe that each coordinator should have some responsibility to help resolve problems related to their recommendations. The Commission will become involved only if the coordinators cannot agree to a solution.

See, e.g., PCIA Comments to Blueprint at 7-8.

Section 90.159 allows applicants to operate for 180 days during the pendency of their applications upon the filing of a properly completed formal application that is accompanied by frequency coordination. See 47 C.F.R. § 90.159.

¹³³ ITA Reply Comments to Blueprint at 11.

The ten day waiting period does not apply to authorizations granted pursuant to Special Temporary Authority in accordance with Section 90.145 of the Commission's rules. See 47 C.F.R. § 90.145.

53. As discussed above, coordinators will be responsible for providing other coordinators certain information within a specified time frame. We are confident, based on past experience, that coordinators will meet these requirements. However, as we have noted in the past when giving responsibility to coordinators, the Commission may, on its own motion, or at the public's request conduct an inquiry into a particular coordinator's performance. After any such investigation we will determine whether decertification or other action is warranted.

4. Coordinator Authority

- Currently, frequency coordinators have the authority to request additional information from applicants requesting coordination if they believe that such information is needed to make proper frequency recommendations. 136 The Land Mobile Communications Council (LMCC)¹³⁷ in its petition for reconsideration recommends that the Commission expand and codify this authority. Specifically, LMCC requests that we amend Section 90.175 of our rules to provide specific authority for coordinators to request all appropriate technical information. system requirements, and justification for requested station parameters from applicants. LMCC further requests that we indicate that applicants bear the burden of proof in overturning the recommendations of a certified frequency coordinator. Additionally, LMCC requests that the Commission state that frequency coordinators may recommend appropriate changes to the parameters of previously licensed stations, or take other appropriate measures that will help to minimize harmful interference or remedy incompatible adjacent channel or co-channel operations. 138 It argues that this expansion of responsibility is necessary because the frequency coordinators will have to play a central role in the effort to protect existing systems and resolve interference complaints arising from the technical changes adopted in the R&O. 139 We stated in the MO&O that we would address this issue in the item dealing with consolidation. 140
- 55. In the R&O, the Commission stated that coordinators may request additional information from the applicant when such information is needed for the coordinator to make a proper frequency recommendation. The Commission also noted in that same proceeding that, in the event of a dispute between the coordinator and an applicant, the applicant will have the

See Frequency Coordination in the Private Land Mobile Radio Services, PR Docket No. 83-737, Report and Order, 103 FCC 2d, 1093 (1986).

³⁶ See R&O. 10 FCC Rcd at 10113.

LMCC is a non-profit association of organizations representing users of land mobile radio and providers of land mobile services and equipment.

LMCC Petition for Reconsideration at 6.

¹³⁹ Id.

¹⁴⁰ See MO&O at para. 98.

burden of proof and persuasion in overturning the coordinator's recommendation. While we consider this to be our present policy, in order to eliminate any confusion we will amend Section 90.175 of the Commission's Rules to specify this authority. With respect to LMCC's other suggestion, coordinators, as well as anyone else for that matter, can always make recommendations concerning minimizing interference. We see no reason to state this explicitly in our rules.

C. Trunking in the PLMR Bands Below 800 MHz

- 56. In the *Notice of Proposed Rule Making* in this proceeding we proposed to allow centralized trunking ("trunking") in the 150-174 MHz and 421-512 MHz bands in those areas where exclusivity is recognized by the Commission, or where all co-channel licensees concur. A centralized trunked system uses multiple channel pairs in conjunction with a computer which automatically assigns a user the first available channel or places the user in a queue to be served in turn. By permitting idle channels to be assigned on an as-needed basis, a trunked system can increase the utilization of radio channels over that obtainable by a conventional system. Although the comments on this issue supported allowing centralized trunking, we did not adopt rules since the *Further Notice* addressed the issue of exclusivity. In its comments to consolidation, UTC notes the benefits of trunking and requests that we provide clarification as to whether frequency coordinators have the authority to designate channel pairs for use by trunked systems.
- 57. Trunked systems will allow PLMR licensees to construct systems which are more efficient than conventional systems, thereby allowing licensees to use fewer channels to provide the same communications capability. Therefore, rather than defer the issue until we reach a decision on exclusivity, we believe the public will benefit by allowing trunking on frequencies below 800 MHz now, provided certain conditions are met.
- 58. To allow trunking to work effectively and efficiently in the PLMR shared bands, we are adopting rules similar to those adopted for interconnection of PLMR stations with the

¹⁴¹ See R&O, 10 FCC Rcd at 10113.

Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket No. 92-235, *Notice of Proposed Rule Making*, 7 FCC Rcd 8105 (1992) (NPRM) at para. 24 and proposed rule section 88.445.

See R&O, 10 FCC Rcd at 10133-136. In a centralized trunking operation frequencies are assigned internally by a computer without monitoring. This assignment procedure works well when frequencies are available on an exclusive basis.

¹⁴⁴ UTC Comments at 8.

Public Switched Network. 145 We will permit licensees to implement centralized trunked systems in the 150-174 MHz, 421-430 MHz, 450-470 MHz, and 470-512 MHz bands, provided that they (1) obtain the consent of all licensees whose service areas 146 overlap a circle with a radius of 113 km (70 mi) from the trunked system's base station and whose operating frequency is 15 kHz or less removed from the operating frequency of a trunked system designed to operate on 25 kHz channels or 7.5 kHz or less removed from a 12.5 kHz trunked system or 3.75 kHz or less removed from a 6.25 kHz trunked system; and (2) comply with all frequency coordination requirements. Statements stipulating the terms of such agreements must be forwarded to the applicable frequency coordinator and the Commission as an attachment to the license application or modification. 147 In the *Further Notice*, we proposed that PLMR licensees be able to obtain some form of exclusivity in their respective service areas. 148 If such rules are adopted, licensees would be able to implement trunked systems in these exclusive areas, provided that they modify their license to show such operation.

59. In areas where licensees implement trunking, new licensees can be assigned the same channel(s) as the trunked system if the new licensee reaches a mutual agreement with the licensee(s) operating the trunked system. If a licensee who previously consented or agreed to participate in a trunked system later decides against this use, and that licensee is unable to negotiate a mutual agreement with the operator(s) of the trunked system, that licensee may request that the Commission reassign it to another channel. This approach provides licensees with maximum flexibility in the operation of their systems while assuring that the use of centralized trunking will not detrimentally impact the operation of another licensee's system.

D. Low Power Frequencies

60. To encourage more efficient use of the available spectrum, the Commission permitted all eligible users in the 450-470 MHz band to be licensed for low power operations (i.e., not to exceed 2 watts) on a secondary non-interference basis on frequencies offset 12.5 kHz

Interconnection of Private Land Mobile Radio Stations With the Public Switched Telephone Network in the Radio Spectrum Below 800 MHz, PR Docket No. 84-414, Report and Order, 50 F.R. 15148 (April 17, 1985).

In the R&O, we defined a station's service area to be the area contained within a station's 37 dBu contour in the 150-174 MHz band and the area within a stations 39 dBu contour in the 421-512 MHz UHF bands. See R&O, 10 FCC Rcd at 10114.

The current FCC Form 600, Application for Mobile Radio Service Authorization, expires on October 31, 1997. The FCC is currently working with the Office of Management and Budget to recertify this form. As part of this effort, we will update the instructions to the main form to reflect new two-letter codes for conventional and trunked systems in the consolidated Public Safety and Industrial/Business Pools below 800 MHz.

See Further Notice, 10 FCC Rcd at 10133-136.

from regularly assignable frequencies ("offset channels"). 149 Since that time, these channels have been heavily used for certain low power operations such as medical telemetry and remote operation of heavy machinery. Under the new channel plan adopted in the R&O, these channels are no longer considered offset channels. Rather, they are regularly assignable channels available for high power operations on a primary basis. 150 We have previously recognized, however, that there is a continuing need for low power operation and provided frequency coordinators with the authority to designate specific channels for low power use. 151 Additionally, we suggested that frequency coordinators exercise this authority in conjunction with the formulation of a consolidation plan. 152 Finally, the Commission provided low power licensees with the option of staving on their currently licensed channel or moving to a coordinator-designated low power frequency and obtaining primary status.¹⁵³ Due to the uncertainty surrounding consolidation of the PLMR Services, coordinators have been reluctant to designate any channels specifically for low power use before a Commission decision on consolidation.¹⁵⁴ On August 11, 1995, at the request of HP, the Commission froze applications requesting power in excess of that previously permitted on the offsets until such time as the issues relative to consolidation and/or the designation of low power frequencies are resolved. 155

61. A number of parties address the issue of low power frequencies in their comments on consolidation and other issues raised in the *Further Notice*. These comments are best summarized by LMCC, which recommends that we give the coordinators a period of time after

The Commission first authorized the use of offset frequencies in the Business Radio Service in 1973. See Amendment of Parts 2 and 91 of the Commission's Rules to Permit Medical Telemetry and Other Low Power Uses of Offset Frequencies in the Business Radio Service, Docket No. 19478, First Report and Order, 41 FCC 2d 8 (1973). In 1981, the use of offset frequencies was expanded to all eligibles in the 450-470 MHz band. See Amendment of Subpart D of Part 90 of the Commission's Rules and Regulations to Permit the Use of 12.5 kHz Offset Assignments in the 450-470 MHz Band in the Private Land Mobile Radio Services, PR Docket No. 80-605, RM-3569, Report and Order, 87 FCC 2d 647 (1981).

¹⁵⁰ See R&O, 10 FCC Rcd at 10110-111.

¹⁵¹ See 47 C.F.R. § 90.267(a).

¹⁵² See R&O, 10 FCC Rcd at 10110-111.

¹⁵³ *Id*.

See, e.g., Joint Pool Comments at 12.

See Public Notice, Freeze on the Filing of High Power Applications for 12.5 kHz Offset Channels in the 450-470 MHz Band (PR Docket 92-235, FCC 95-255), DA 95-1771, (released Aug. 11, 1995). This action was taken after HP voiced concern that until such time as the frequency coordinators established dedicated low power channels, existing low power operations had to be protected.

See, e.g., API Comments at 8-9; Forest Industries Telecommunications (FIT) Reply Comments at 5; Weyerhaeuser Comments at 8.

a decision is made on consolidation to develop a plan to meet PLMR low power needs.¹⁵⁷ LMCC also recommends that we give licensees of offset channels an additional period of time to either migrate to the new low power channels or convert to primary status by registering their coordinates¹⁵⁸ before lifting the current licensing freeze in the 450-570 MHz band.¹⁵⁹ HP supports giving licensees a time to migrate to new channels.

62. In addition to the comments noted above, we received several petitions for reconsideration of the framework we had established for resolving low power issues. Specifically, the petitioners urge the Commission to establish blocks of contiguous spectrum based on functional requirements and technical compatibility, for the exclusive use of low power systems. HP and SpaceLabs suggest that a 2.5 megahertz contiguous block of low power channels should be created, and a one-for-one swap of existing low power channels for channels in this dedicated block should be instituted. Also, HP contends that adjacent channel restrictions need to be established to protect low power operations. HP further recommends that the Commission take an active role and establish a minimum set of rules for low power channels. In the MO&O, we deferred action on these petitions until such time as we addressed consolidation.

1. Designated Channels

63. We understand the reluctance, to date, of coordinators to designate specific channels for low power use. At the same time, however, we believe it is vitally important for the PLMR community to address the issue of low power channels as soon as possible. Would-be licensees of offset channels cannot apply to use these channels for high power operations because

LMCC Comments to Further Notice at 12.

Currently, all systems are licensed as mobiles (See 47 C.F.R. § 90.267) and applicants do not have to provide transmitter coordinates to obtain a license on offset channels. Under LMCC's plan, licensees on offset channels could obtain primary status by modifying their license to specify transmitter coordinates.

LMCC Comments to Further Notice at 12-13.

See, e.g., HP Petition for Reconsideration at 3-5; SpaceLabs Petition for Reconsideration at 7-8; Schlumberger Meter Communication Systems (Schlumberger) Petition for Reconsideration at 4.

See HP Petition for Reconsideration at 3-5; SpaceLabs Petition for Reconsideration at 7-8; Schlumberger Meter Communication Systems (Schlumberger) Petition for Reconsideration at 4. See also HP Reply Comments to Further Notice at 1; SpaceLabs Comments at 3-4; Schlumberger Comments at 1-2.

See HP Petition for Reconsideration at 4-5.

HP Comments at 2. See also, Ex parte presentation of HP and SpaceLabs on December 18, 1996.

¹⁶⁴ See MO&O at para. 99.

of the current licensing freeze, ¹⁶⁵ and low power users want assurance that they will be protected from interference by high powered operations before switching channels. Accommodating these competing interests while establishing a workable low power frequency plan is not a trivial matter. In major metropolitan areas, the demand for both high power and low power operations exceeds the number of frequencies available. Moreover, it is highly likely that such high power and low power needs will vary based on geographic location. In this connection, we believe that the coordinators will need some time to analyze the current use patterns of these offset channels and determine a compromise solution between the two types of operations. ¹⁶⁶ Therefore, in accordance with the recommendation of LMCC, we will give the coordinators in each of the two pools six months from publication of this *Second Report and Order* in the Federal Register to develop a consensus plan for low power operations in their respective pools. ¹⁶⁷

64. HP recommended that we codify the basic aspects of the plan fashioned by the coordinators (e.g., by setting forth in our rules the frequencies designated for low power operation). In the R&O, we delegated to the frequency coordinators the authority to designate low power frequencies; our decision was not to specify such frequencies in the rules. We continue to believe that this approach provides the frequency coordinators, who have knowledge of user requirements and local conditions, with maximum flexibility in the management of the PLMR spectrum. Further, this allows frequencies to be easily added or subtracted from the designated list as may be warranted. We find nothing in the record at this time that persuades us to change this approach. Further, consistent with this approach, we will leave it up to the coordinators whether to designate contiguous spectrum or to specify individual channels (non-contiguous spectrum) for low power operations. Low power operation on the designated channels will be protected through coordinators will be required to maintain a list of low power channels and make it available to the public upon request. We encourage the frequency coordinators to periodically review the low power channel plan and modify it when appropriate. If a consensus

See supra note 155.

SpaceLabs, a manufacturer of low power biomedical telemetry equipment, has expressed a willingness to work with the high power industry to devise a plan that will advance the interests of all PLMR users. See SpaceLabs Comments to Blueprint.

In this connection, LMCC has established a working group to examine issues related to licensing and regulation of low-power frequencies. Although the LMCC working group has not completed its task and LMCC has not filed any proposals with the Commission, ITA incorporates key provisions of the tentative LMCC plan into its Blueprint. This plan calls for fifty channel pairs of coordinated low-power spectrum and twenty-five channel pairs for itinerant low-power use. See ITA Blueprint at 6-7.

Once accepted and approved by in-pool coordinators, a mutually agreed upon coordinator plan for low power channels will be fully supported by the Commission.

¹⁶⁹ See R&O, 10 FCC at Rcd 10110.

regarding the establishment of a low power channel plan cannot be reached, we will revisit this issue.

2. Time Frame for Migration

- In addition to its recommendation that the frequency coordinators be given six 65. months to determine which channels should be designated for low power use, LMCC recommends several steps to ensure that the migration of low power users from their current channels to these new designated channels occurs smoothly. These suggested measures include (1) low power offset licensees being given six months to declare their intent to convert to primary status by either registering their coordinates¹⁷⁰ or by modifying their license to operate on the designated low power channels;¹⁷¹ and (2) providing seven months for offset licensees to migrate to the designated channels.¹⁷² We agree with LMCC that low power users should be able to attain primary status on these offset channels if they so desire by modifying their licenses to specify transmitter coordinates so that frequency coordinators know the location of such systems and can take them into account when making frequency recommendations. In this connection, we will confer primary status on licensees operating on the former low power offset channels that already have provided their coordinates to the Commission. These licensees should notify the Commission at the time of their license renewal that they are operating in this manner. This will give offset licensees the flexibility to remain on their current licensed frequency or change to a new low power frequency. Because these channels are available for high power operation, however, licensees that remain on their current licensed frequency may have to share it with a new high power user. Therefore, we expect that the majority of low power users will be inclined to migrate to the new low power channels once they are identified in order to reduce the chance of interference from co-channel high powered operations.
- 66. Further, contrary to LMCC's contention, we do not believe that low power users should be required to declare their intent to migrate to low power channels or modify their license to obtain primary status within a certain time frame. We believe the decision whether or not to

Under the rules prior to the R&O, all stations using a low power offset frequency under 47 C.F.R. § 90.267 were licensed as mobiles. These stations, however, were permitted to serve the functions of base, fixed, or mobile relay stations. Because these stations were licensed as mobiles regardless of the type of function they actually served, applicants were required only to provide a central coordinate and a point radius defining their area of operations. Thus, frequency coordination on these frequencies is very difficult because the coordinators do not necessarily know exactly where stations are actually located.

In LMCC's plan, this step would occur prior to the coordinators designating any channels. See LMCC Comments at 12.

LMCC Comments to Further Notice at 12-13.

Although not required, many licensees supply coordinates on their initial license application.

migrate or obtain primary status is a business decision and best left up to individual licensees to make within their own time frame according to their individual requirements. Additionally, because the designated channels, in some cases, may be the same channels that many low power users are already using, ¹⁷⁴ licensees would not be able to make informed decisions regarding migration until channels are designated. Therefore, we decline to require current low power users to declare their intent to migrate to dedicated low power channels or modify their license to obtain primary status by a certain date.

We do agree, however, with LMCC's suggestion to give licensees on the low 67. power channels a chance to migrate before licensing high power operations on these channels. The PLMR community believes seven months is a reasonable amount of time for offset licensees to decide whether to switch to new low power channels.¹⁷⁵ Therefore, in this connection, we will provide a period of seven months for low power users to migrate to new low power frequencies. Additionally, concurrent with the end of this migration period¹⁷⁶ we note our intention to lift the current licensing freeze in the 450-470 MHz band¹⁷⁷ and allow new high power systems to be licensed on any former 12.5 kHz offset channel not specifically designated for low power use. 178 We will not lift the freeze, however, if a consensus plan has not been established. In the interim, we will grant partial relief and permit the licensing of high power systems on these channels, provided that the license applications are accompanied by a statement from the frequency coordinator attesting that operation of a new high powered system will not impact any currently operating co-channel low power system. If interference to a low power system from a high power operator using the offset frequencies does occur prior to the end of the migration period. the high power licensee will be expected to remedy the situation through any means possible. including shutting its system down.

These licensees would not be required to move to obtain a primary designation.

LMCC Comments to Further Notice at 12-13.

Assuming a consensus low power plan is established prior to the effective date of the rules, the seven-month migration period starts when the rules become effective.

We are not addressing the freeze on licensing new high powered stations in the 421-430 and 470-512 MHz bands at this time. See Public Notice, Freeze on the Filing of Applications for 12.5 kHz Offset Channels in the 421-430 MHz and 470-512 MHz Bands (PR Docket 92-235, FCC 95-255), DA 95-1839, released August 22, 1995. This freeze, unlike the freeze at 450-470 MHz, was instituted in response to concerns from LMCC that the coordinators lacked information to make informed frequency recommendations regarding the assignment of the new channels. We will consider lifting this freeze at such time as the coordinators agree upon technical standards. See para. 43, supra.

The former 12.5 kHz offset channels will only be authorized for use with equipment that operates on channels of 12.5 kHz or less. See R&O, 10 FCC Rcd at 10094.

- 68. In a related matter, PCIA, in its petition for reconsideration, recommends that we allow a six-month transition period for low power licensees to migrate to new low power channels before accepting any new low power applications on the designated channels. We will not adopt such a policy. We believe that it is not in the public interest to keep applicants, especially those who propose to operate in a highly efficient manner (*i.e.*, with low power), from obtaining licenses on designated low power channels. Additionally, because low power systems have small operating areas, we believe that there should be enough frequencies to accommodate all current and prospective low power licensees.
- 69. Finally, in its petition for reconsideration, Florida predicts a windfall for frequency coordinators and asks the Commission to reconsider the financial impact of this migration on existing licensees. We acknowledge that coordinators will collect fees from low power licensees when they apply to modify their systems to operate on the dedicated low power frequencies. In light of this, we encourage the coordinators to develop a reasonable fee schedule to reflect the relative ease of this type of coordination as compared to coordinating new high power stations.

V. CONCLUSION

70. This Second Report and Order represents a significant step in the evolution of the private land mobile radio services. With its adoption, we are consolidating the PLMR services into two service pools - Public Safety and Industrial/Business - while protecting critical safety related communications and providing benefits that are not realizable under the current system. We are also incorporating regulatory changes to the frequency coordination process to provide PLMR users with increased choices and flexibility. These changes reflect a comprehensive restructuring of the PLMR regulatory environment and will promote the highly effective and efficient use of PLMR spectrum and contribute to an environment in which advanced technologies will thrive.

VI. PROCEDURAL MATTERS

A. Regulatory Flexibility Act

71. Appendix B contains a Final Regulatory Flexibility Analysis with respect to the Second Report and Order.

¹⁷⁹ PCIA Petition for Reconsideration at 7; see also, HP Petition for Reconsideration at 5.

Florida Petition for Reconsideration at 2.

B. Ordering Clauses

- 72. In view of the foregoing and pursuant to the authority contained in Sections 4(i), 302, 303(g), 303(r), 332(a), and 405 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302, 303(g), 303(r), 332(a), and 405 and Section 1.429(i) of the Commission's Rules, 47 C.F.R. § 1.429(i), IT IS ORDERED that Part 90 of the Commission's Rules and Regulations IS AMENDED as specified in Appendix E.
- 73. IT IS FURTHER ORDERED that the rule changes made herein WILL BECOME EFFECTIVE [6 months after publication in the Federal Register], except for § 90.17 which WILL BECOME EFFECTIVE [upon publication in the Federal Register].
- 74. **IT IS FURTHER ORDERED** that the Joint Request for Temporary Relief filed February 4, 1997, by International Municipal Signal Association, International Association of Fire Chiefs, Inc., American Association of State Highway and Transportation Officials, and Forestry-Conservation Communications Association **IS GRANTED** in accordance with the discussion in paragraphs 24-26, *supra*, of this *Second Report and Order*.

C. Contacts for Information

75. For further information, contact Ira Keltz of the Wireless Telecommunications Bureau, Private Wireless Division, at (202) 418-0680 or via E-Mail to "mayday@fcc.gov".

FEDERAL COMMUNICATIONS COMMISSION

William F. Cator Acting Secretary

APPENDIX A

List of Commenters and Comment Summary

List of Commenters on Consolidation:

- 1. Alarm Industry Communications Committee (AICC)
- 2. American Automobile Association (AAA)
- 3. American Petroleum Institute (API), Supplemental Comments
- 4. Association of Public-Safety Communication Officials-International, Inc. (APCO)
- 5. Burlington Northern Santa Fe Corporation (BNSF)
- 6. Canadian Pacific Railway System (CPRS)
- 7. Coalition of Industrial and Land Transportation Radio Users (Coalition)
 - Includes:

American Automobile Association, American Trucking Associations, Inc., Forest Industries Telecommunications, International Taxicab and Livery Association, and Manufacturers Radio Frequency Advisory Committee, Inc.

- 8. CSX Transportation, Inc. (CSX)
- 9. Hewlett-Packard Company (HP)
- 10. International Association of Fire Chief, Inc., and International Municipal Signal Association (IAFC/IMSA)
- 11. Joint Comments of Specialized Land Mobile Communications Users (Joint Commenters)
 Includes: American Automobile Association, American Trucking Associations,
 Association of American Railroads, Central Alarm Station Association,
 Forest Industries Telecommunications, International Taxicab and Livery
 Association, and Manufacturers Radio Frequency Advisory Committee
- 12. Joint Pool Consolidation Proposal (Joint Pool)
 - Includes: Personal Communications Industry Association, Industrial
 Telecommunications Association, Alliance of Motion Picture and
 Television Producers, Newspaper Association of America, and Telephone
 Maintenance Frequency Advisory Committee
- 13. Norfolk Southern Corporation (NSC)
- 14. Potlatch Corporation (Potlatch)
- 15. Public Safety Communications Council (PSCC)
- 16. Schlumberger Meter Communication System
- 17. SpaceLabs Medical, Inc. (SpaceLabs)

Reply Comments

- 1. Association of Public-Safety Communications Officials-International, Inc.
- 2. Forestry Conservation Communications Association (FCCA)
- 3. International Association of Fire Chief, Inc., and International Municipal Signal Association (IAFC/IMSA)

Supplemental Comments

- 1. Association of American Railroads (February 21, 1996)
- 2. Association of American Railroads (April 12, 1996)

List of Commenters on Consolidation and Further Notice:

- 1. Aeronautical Radio, Inc. (ARINC)
- 2. American Association of State Highway and Transportation Officials (AASHTO)
- 3. American Gas Association (AGA)
- 4. Association of American Railroads (AAR)
- 5. Boeing Company
- 6. City of Covington, Virginia (Covington)
- 7. Nebraska Public Power District (NPPD)
- 8. PacifiCorp
- 9. City of Tucson, Arizona (Tucson)
- 10. Union Pacific Railroad Co. and Missouri Pacific Railroad Co. (Union Pacific)
- 11. UTC, The Telecommunications Association (UTC)
- 12. Weyerhaeuser Company (Weyerhaeuser)

Reply Comments

- 1. Association of American Railroads
- 2. Boeing Company
- 3. Forest Industries Telecommunications (FIT)
- 4. Hewlett-Packard Company
- 5. International Taxicab and Livery Association (ITLA)
- 6. Manufacturers Radio Frequency Advisory Committee, Inc. (MRFAC)
- 7. Maximum Service Television, Inc. (MSTV)
- 8. Nebraska Public Power District (NPPD)
- 9. Pacific Bell (PacBell)
- 10. Personal Communications Industry Association (PCIA)
- 11. Securicor Radiocoms Limited (Securicor)

List of Commenters to Industrial Telecommunications Association Proposed Technical Blueprint for Consolidation:

- 1. Aeronautical Radio, Inc. (ARINC)
- 2. Affiliated American Railroads (AARR)
- 3. Alarm Industry Communications Council (AICC)

- 4. Alliance Communications (Alliance)
- 5. Automobile Association of America (AAA)
- 6. American Electric Power (AEP)
- 7. American Petroleum Institute (API)
- 8. Associated Oregon Loggers, Inc. (Loggers)
- 9. Carolina Power & Light Company (CP&L)
- 10. Cass County Electric Cooperative (Cass)
- 11. City of Austin, Texas (Austin)
- 12. City Public Service of San Antonio, Texas (CPS)
- 13. Coalition of Industrial and Land Transportation Radio Users (Coalition)
 - Includes Automobile Association of America, American Trucking Association, Forest Industries Telecommunications, International Taxicab and Livery Association, and Manufacturer's Radio Frequency Advisory Committee
- 14. Columbia Helicopters, Inc. (Columbia)
- 15. Consumers Energy Company (Consumers)
- 16. Detroit Edison Company (DetroitEd)
- 17. E.F. Johnson Company
- 18. Fruit Growers Supply Company (FGS)
- 19. GKL Construction Company (GKL)
- 20. Hewlett-Packard Company (HP)
- 21. Indianapolis Power & Light Company (IPL)
- 22. Industrial Telecommunications Association (ITA)
- 23. Kentucky Utilities Company (KUC)
- 24. Motorola
- 25. National Fuel Gas (NFG)
- 26. National Rural Electric Cooperative Association (NRECA)
- 27. Ohio Edison (OHED)
- 28. Pacific Gas and Electric Company (PGE)
- 29. Pope & Talbot, Inc. (P&T)
- 30. Potomac Electric Power Company (PEPCO)
- 31. Public Safety Communications Council (PSCC)

Includes: American Association of State Highway and Transportation Officials, Association of Public Safety Communications Officials International, Inc., International Association of Fish and Wildlife Agencies, International Municipal Signal Association, Forestry Conservation Communications Association, and National Association of State Foresters

- 32. Public Service Electric and Gas Company (PSE&G)
- 33. Simpson Timber Company (Simpson)
- 34. SpaceLabs, Inc. (SpaceLabs)
- 35. Tenneco Packaging (Tenneco)
- 36. Tri-State Generation and Transmission Association, Inc. (Tri-State)
- 37. UTC, The Telecommunications Association (UTC)

- 38. Washington Suburban Sanitary Commission (WSSC)
- 39. Westvaco Corporation Timberlands Division (Westvaco)
- 40. Willamette Industries, Inc. (Willamette)

Reply Comments

- 1. Affiliated American Railroads (AARR)
- 2. Alarm Industry Communications Committee (AICC)
- 3. American Automobile Association (AAA)
- 4. The Boeing Company (Boeing)
- 5. Champion Communication Services, Inc. (Champion)
- 6. Coalition of Industrial and Land Transportation Radio Users (Coalition)
- 7. Industrial Telecommunications Association (ITA)
- 8. Personal Communications Industry Association (PCIA)
- 9. UTC, The Telecommunications Association (UTC)

APPENDIX B

Summary of Industry Submitted Consolidation Proposals

AICC and AAA Option 1 (comments refer only to pools which would affect AICC and AAA members)					
Public Safety Local Government, Police, Fire, Highway Maintenance, Forestry-Conservation, Emergency Medical	Private Safety Functions that warrant treatment as quasi-public safety operations. (e.g., central station alarm operations, emergency road service, special emergency services, etc.)				
Option 2					
AICC	AAA				
<u>Quasi-Public Safety</u> Includes Public and Private Safety entities as define above.	Land Transportation Automobile Emergency, Motor Carrier, Railroad, Taxicab Not opposed to a separate Railroad pool				
API					
systems essential for Safety Radio	mmercial Radio Existing SMR allocations pool Specialized Mobile Frequencies accessible to all PLMR users				
Coalition (Supported by ITLA, MRFAC, Weyerhaeuser)					
Public SafetyBusinessLocal Government,Business, Private CarriePolice, Fire, HighwayPaging, SpecialMaintenance,Emergency, SpecialForestry-Conservation,Industrial, Motion PictureEmergency MedicalRelay Press	Manufacturers, Forest Taxicab, Automobile Emergency				
Covington					
Public Safety Local Government, Police, Fire, Highway Maintenance, Forestry- Conservation, Emergency Medical, Special Emergency	<u>Radio Service</u> n which resale is Industrial Radio Service Business and internal needs				

Table 2: Summary of Industry Submitted Consolidation Proposals (contd.)

Joint Pool				
Public Safety Local Government, Police, Fire, Highway Maintenance, Forestry-Conservation, Emergency Medical, Special Emergency		Public Service All others. Set aside specific frequencies for unique requirements.		
UTC, (supported by AGA, PacBell 1)				
Emergency Response Police, Fire, Emergency Medical, Special Emergency	Public Service Local Government, Highway Maintenance, Forestry-Conservation, Power, Petroleum, Railroad; services which provide critical logistical functions in support of the general public Includes Telephone Maintenance			
AAR, BNSF, CPRS, CSX, Joint Commenters, NSC, Potlatch, Union Pacific				
No Consolidation				
APCO				
No consolidation in Public Safety Pool				
FCCA, IAFC/IMSA				
Base consolidation of Public Safety on the PSWAC report				

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APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act, 5 U.S.C. § 603 (RFA), Initial Regulatory Flexibility Analyses (IRFA) were incorporated in the *Notice of Proposed Rule Making* and the *Further Notice of Proposed Rule Making* in PR Docket 92-235. The Commission sought written public comments on the proposals in the *Refarming Notice* and *Further Notice*, including on the IRFA. The Commission's Final Regulatory Flexibility Analysis (FRFA) in this *Second Report and Order (Second R&O)* conforms to the RFA, as amended by the Contract With America Advancement Act of 1996.²

I. Need For and Objective of the Proposed Rule

- 2. Our objective is to increase spectrum efficiency and facilitate the introduction of advanced technologies into the 150-174 MHz, 421-430 MHz, 450-470 MHz, and 470-512 MHz private land mobile radio (PLMR) bands. The *Report and Order* in this proceeding modified the Commission's rules to resolve many of the technical issues which inhibited the use of spectrally efficient technologies in these frequency bands. It also stated the Commission's intent to consolidate the twenty existing radio service pools. The *Further Notice* in this proceeding proposed several methods of introducing market based incentives into the PLMR bands, including exclusivity. This *Second R&O* consolidates the radio service frequency pools, and addresses related issues such as frequency coordination, trunking, and low power frequencies.
- 3. We find that the potential benefits to the PLMR community exceed any negative effects that may result from the promulgation of rules for this purpose. Thus, we conclude that the public interest is served by modifying our rules to consolidate the PLMR services and increase the spectral efficiency of the PLMR bands.

II. Summary of Significant Issues Raised by the Public Comments in Response to the Initial Regulatory Flexibility Analysis

Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, PR Docket 92-235, Notice of Proposed Rule Making, 7 FCC Rcd 8105 (1992) (Refarming Notice); Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignments Policies of the Private Land Mobile Radio Services, PR Docket No. 92-235, Report and Order and Further Notice of Proposed Rule Making, 10 FCC Rcd 10076 (1995) (Report and Order or Further Notice).

Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is "The Small Business Regulatory Enforcement Fairness Act of 1996" (SBREFA), codified at 5 U.S.C. § 601 et seq.

- 4. No comments were submitted in direct response to the IRFA. We have, however, reviewed general comments that may impact small businesses.
- 5. Much of the impact on small businesses arises from the central decision in this proceeding -- the number of frequency pools. Commenters submitted proposals which ranged from keeping the current system in place to consolidating to two pools.³ This affects small businesses in the following way. A smaller number of pools provides a greater number of frequencies available for small business to use to meet their coordination needs. Additionally, by creating fewer pools, frequency coordinators will now have to compete, thus small business that use PLMR systems could expect to pay lower prices for frequency coordination and receive better service. Finally, consolidating the PLMR services provides each frequency coordinator, who currently only provides service for a narrowly defined type of user, with the ability to expand its business base.

III. Description and Estimate of the Number of Small Entities Subject to which the Rules Apply

6. The rules adopted in this Second Report and Order will apply to small businesses that choose to use radios that operate in the PLMR bands below 512 MHz and to small businesses that are designated as certified frequency coordinators in these bands. The are no Commission imposed requirements, however, for any entity to use these products.

Estimates for PLMR Licensees

- 7. Private land mobile radio system serve an essential role in a vast range of industrial, business, land transportation, and public safety activities. These radios are used by companies of all sizes operating in all U.S. business categories. Because of the vast array of PLMR users, the Commission has not developed nor would it be possible to develop a definition of small entities specifically applicable to PLMR users. For the purpose of determining whether a licensee is a small business as defined by the Small Business Administration (SBA), each licensee would need to be evaluated within its own business area.
- 8. Because the Regulatory Flexibility Act amendments were not in effect until the record in this proceeding was closed, the Commission was unable to request information regarding the number of small entities that are private land mobile radio licensees. Therefore, the Commission is unable at this time to determine the number of small businesses which could be impacted by the rules. However, the Commission's fiscal year 1994 annual report indicates that at the end of fiscal year 1994 there were 1,101,711 licensees operating 12,882,623

³ See para. 11, in the Second R&O.

transmitters in the PLMR bands below 512 MHz.⁴ Further, because any entity engaged in a commercial activity is eligible to hold a PLMR license, these rules could potentially impact every small business in the U.S.

9. The RFA also includes small governmental entities as a part of the regulatory flexibility analysis.⁵ The definition of a small governmental entity is one with a population of less than 50,000.⁶ There are 85,006 governmental entities in the nation.⁷ This number includes such entities as states, counties, cities, utility districts, and school districts. There are no figures available on what portion of this number has populations of fewer than 50,000. However, this number includes 38,978 counties, cities, and towns, and of those, 37,566, or 96 percent, have populations of fewer than 50,000.⁸ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 96 percent, or 81,600 are small entities that may be affected by our rules.

Estimates for Frequency Coordinators

10. Neither the Commission nor the SBA have developed a definition of small entities specifically applicable to spectrum frequency coordinators. Therefore, we conclude that the closest applicable definition under SBA rules is Business Associations (SIC 8611). The SBA defines a small business association as an entity with \$5.0 million or less in annual receipts. There are 18 entities certified to perform frequency coordination functions under Part 90 of our rules. However, we are unable to ascertain how many of these frequency coordinators are classified as small entities under the SBA definition. The Census Bureau indicates that 97% of business associations have annual receipts of \$4.999 million or less and would be classified as small entities. The Census Bureau category is very broad, and does not include specific figures for firms that are engaged in the coordination of spectrum frequencies. Therefore, for the purposes of this regulatory flexibility analysis, we estimate that almost all of the 18 spectrum frequency coordinators are small as defined by the SBA.

IV. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements of the Rules

See Federal Communications Commission, 60th Annual Report, Fiscal Year 1994 at 120-121.

⁵ See 5 U.S.C. § 601(5) (including cities, counties, towns, townships, villages, school districts, or special districts).

⁶ *Id*.

¹ 1992 Census of Governments, U.S. Bureau of the Census, U.S. Department of Commerce.

⁸ Id.

- 11. The rules adopted in this Second R&O do not have any general reporting or recordkeeping requirements for PLMR licensees. There is, however, one compliance requirement. Applicants for new or modified PLMR stations will be required to wait ten days prior to commencing operation pursuant to conditional authority. Such a waiting period is necessary to ensure that all in-pool frequency coordinators are notified regarding the proposed system before the applicant starts transmitting. While we want the licensing process to be as quick as possible, we believe all affected coordinators should be aware of a proposed operation before an applicant commences transmitting. Regarding this issue, many commenters identify a need for a mandatory concurrence period. Other commenters argue that a mandatory concurrence period is unnecessary. Rather than a mandatory concurrence period, which we believe could prolong the licensing process, thereby affecting small businesses, we believe the adopted waiting period will accomplish the same goal of providing a method for coordinators to ensure that existing radio systems will not suffer harmful interference from new or modified systems. 12
- 12. Additionally, in the specific instances where licensees want to construct a centralized trunking rather than a traditional system, they must obtain concurrence from nearby affected users and forward such agreements to the applicable frequency coordinator and the Commission as an attachment to the license application form, FCC Form 600.¹³ Because of the fundamental differences between trunked and traditional systems, such action is necessary in order to avoid a licensee from causing harmful interference to other nearby licensees, many of which may be small businesses.
- 13. There are several reporting, recordkeeping, and compliance requirements applicable to the Commission certified PLMR frequency coordinators. These new requirements are necessary to ensure that each frequency coordinator has access to the information necessary to perform competent frequency coordinations for their customers.
 - (1) Because several frequency coordinators will now be able to recommend frequencies within a common frequency pool, each needs to know the recommendations of each of the other frequency coordinators. Such information is necessary to avoid situations where harmful interference is created because two or more coordinators recommend the same frequency in the same area at approximately the same time to different applicants. Therefore, we are requiring

See para. 51, in the Second R&O.

See Coalition ex parte filing of December 20, 1996 in which it states that a concurrence period of ten to twenty days is necessary for in-pool coordinators to object to a specific frequency recommendation. This view is supported by several other commenters. See, e.g., UTC Comments to Blueprint at 13.

See PCIA Comments to Blueprint at 7-8; ITA ex parte filing of January 6, 1997.

¹² ITA supports this ten day waiting period. See ITA Reply Comments to Blueprint at 11-12.

See para. 58, in the Second R&O.